7.—NOTE ON FOSSIL CORALS FROM LANGLEY PARK BORE, PERTH.

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INTRODUCTORY NOTE.

Through the kindness of Dr. Dorothy Carroll of the Department of Geology, University of Western Australia, I have been enabled to examine the specimens of stony hexacorals obtained from the Langley Park Bore at Perth. All the specimens came from a depth between 428 and 440 feet and occurred in a "soft sandstone or unconsolidated grey sand, medium grained, with a little clay." Two species are represented in the collection, one belonging to *Trematotrochus lateroplenus* Dennant, the other probably a new species of oculinid but not specifically named at this time. The fact that the first species previously has been found in Balcombian strata at Shelford, Muddy Creek (lower), "Fishing Point," and "Lower Moorabool," and in Janjukian strata at Spring Creek, Cape Otway, and Lake Alexandrina (Janjukian ?), Victoria (Dennant and Kitson,* p. 135), might be taken to indicate Balcombian or Janjukian age for some of the beds in the Langley Park Bore, but the known long range of some of the corals of the Australian Tertiary deposits (a few species even ranging from Balcombian to Recent) makes any such assumption based upon the corals unwarranted at this time. Very careful studies of the Australian Tertiary coral species and their stratigraphic distribution are desiderata, practically nothing having been done since Dennant's work at the turn of the last century.

DESCRIPTIONS.

Family **CARYOPHYLLIIDAE.**

Subfamily **TURBINOLIINAE.**

Genus **TREMATOTROCHUS** Tenison Woods 1877.

Trematotrochus lateroplenus Dennant 1899. *Trans. Proc. Roy. Soc. South Australia*, xxiii, 282, pl. 9, figs 2a, b.

The single, slightly worn specimen identified with this species agrees closely with Dennant's excellent description of the types, except for its size, which is smaller. Typical specimens, according to Dennant, measure 5 mm. in height, and 2 x 3 mm. across the compressed calice. The present specimen, probably immature, is 2·5 mm. in height, the calice 1 x 2 mm. In all other respects there are no differences. The septal arrangement of the specimen is peculiar to this and one other species of the genus, that is, there are three complete cycles of septa (24) with the fourth cycle developed only in those systems on either side of the ends of the longer axis of the calice, giving a total of 32 septa.

* J. Dennant and A. E. Kitson, Catalogue of the Described Species of Fossils (except Bryozoa and Foraminifera) in the Cainozoic Fauna of Victoria, South Australia, and Tasmania. *Rec. Geol. Survey Victoria*, Vol. 1, Pt. 2, p. 89, 1902–6.

Occurrence : Type locality, Balcombian at Shelford, Victoria ; and at Muddy Creek, Victoria. Langley Park Bore, Perth, Western Australia, between 428 and 440 feet. (No. 19,999, University of Western Australia, Dept. of Geology).

Family **OCULINIDAE.**

Subfamily **OCULININAE.**

Genus **OCULINA** Lamarck 1816.

Oculina ? sp.

Several small fragments may pertain to this genus, ranging from Upper Cretaceous to Recent especially in Europe and North America, but all are badly worn and certain essential structural details lacking, so that it is undesirable to make them the types of a new species. There are, however, no species now known from the Australian Tertiaries that remotely resemble these pieces, and there is no point in comparing them with forms occurring elsewhere until a more precise generic assignment is possible.

The corallum appears to have been small and dendroid, the corallites about 1·5 to 1·75 mm. in diameter, rather short and branching mostly in one plane simultaneously on either side of the parent nearly at right angles. Septa strongly spinose laterally, in three complete cycles (24), the first two equal and extending to the columella, the third little more than rudimentary. Columella small, composed of 4 to 6 twisted trabecular strands. Dissepiments feeble. Externally the corallites are covered with small faint costal granulations, arranged more or less in rows corresponding to the septa.

The principal obstacles to generic identification lie in the absence of well-preserved calices showing the disposition of the pali, traces of which are present, and the lack of information concerning the mode of colony-formation. If pali are present in one irregular crown before the first two cycles, and this is quite likely, the genus may be either *Oculina* or *Archohelia*, depending on the presence or absence of a persistent axial corallite : if there is but one crown before the second cycle it may be *Sclerhelia*, a genus known only from two Recent species.

(No. 20,000, University of Western Australia, Dept. of Geology).